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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|---------------------------|
| 10/707,559 | 12/21/2003 | Yang-En Wu | ADTP0047USA | 1558 |
| 27765 | 7590 | 06/14/2005 | EXAMINER | |
| NORTH AMERICA INTERNATIONAL PATENT OFFICE (NAIPC) | | | | CHOWDHURY, TARIFUR RASHID |
| P.O. BOX 506 | | | | ART UNIT |
| MERRIFIELD, VA 22116 | | | | PAPER NUMBER |
| | | | | 2871 |

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|----------------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/707,559 | WU ET AL. |
| | Examiner Tarifur R. Chowdhury | Art Unit 2871 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 03 June 2005.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) 4,17 and 18 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-3,5-10,15 and 16 is/are rejected.
- 7) Claim(s) 11-14 is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 21 December 2003 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ . |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Election/Restrictions

1. Claims 4, 17 and 18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 06/03/05.

Priority

2. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

- (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

5. **Claims 1-3, 5-9, 15 and 16 are rejected under 35 U.S.C. 102(a) as being anticipated by applicant's admitted prior art (AAPA).**
6. The AAPA described in the instant application discloses (paragraph 0006-0011) and shows in Figs. 1 and 2, an in-plane switching mode (IPS) liquid crystal display comprising:
 - a bottom substrate (14), at least one pixel area being defined on an upper surface of the bottom substrate;
 - at least one first electrode (16) disposed in the pixel area on the upper surface of the bottom substrate, the first electrode being a protrusion elongated along a first direction;
 - at least one second electrode (18) disposed in the pixel area on the upper surface of the bottom substrate, the second electrode being a protrusion elongated along the first direction, and the second electrode and the first electrode being in an interlaced arrangement (Fig. 2);
 - a top substrate (12) being in parallel with and opposite to the bottom substrate; and
 - a plurality of liquid crystal molecules (17) filled in between the bottom substrate and the top substrate;
wherein a longitudinal axis of the liquid crystal molecules is positioned along a second direction and is horizontally arranged between the upper surface of the bottom substrate and a lower surface of the top substrate, and an angle (90 degrees) is formed between the second direction and the first direction

Accordingly, claim 1 is anticipated.

As to claim 2, the AAPA described in the instant application also discloses shows in Fig. 1 that the display further comprising a first polarizer (13b) and a second polarizer (13a) disposed on an upper surface of the top substrate (12) and a lower surface of the bottom substrate (14) respectively.

As to claim 3, the AAPA described in the instant application also discloses that a polarized direction of the first polarizer is parallel to the second direction, and a polarized direction of the second polarizer is perpendicular to the second direction (paragraph 0007).

As to claims 5 and 7, inherently electrodes are formed of either transparent material or non-transparent material.

As to claims 6 and 8, it is clear from Figs. 1 and 2 that the cross section of the first electrode and the second electrode is approximately in a shape of a rectangle.

As to claim 9, the AAPA described in the instant application also shows in Fig. 1 that the display further comprising an isolation layer (15) disposed between the first electrode (16) and the second electrode (18) to isolate the first electrode and the second electrode for preventing the first electrode and the second electrode from short circuiting (paragraph 0006).

As to claim 15, the AAPA described in the instant application also discloses that the liquid crystal molecule comprises positive dielectric constant anisotropy liquid crystal molecule (paragraph 0006).

As to claim 16, Fig. 1 of the AAPA further shows that the display further comprising a first alignment layer (19b) and a second alignment layer (19a) disposed on the lower surface of the top substrate and the upper surface of the bottom substrate respectively.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. **Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over the AAPA.**

10. The AAPA described in the instant application do not explicitly disclose that the electrode comprises a bump and a conductive layer disposed on a surface of the bump. However, it is common and known in the art to form an electrode having a bump layer

and a conductive layer disposed on a surface of the bump layer to diffusely scatter light and thus to improve the display performance and thus would have been obvious to one of ordinary skill in the art.

Allowable Subject Matter

11. Claims 11-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

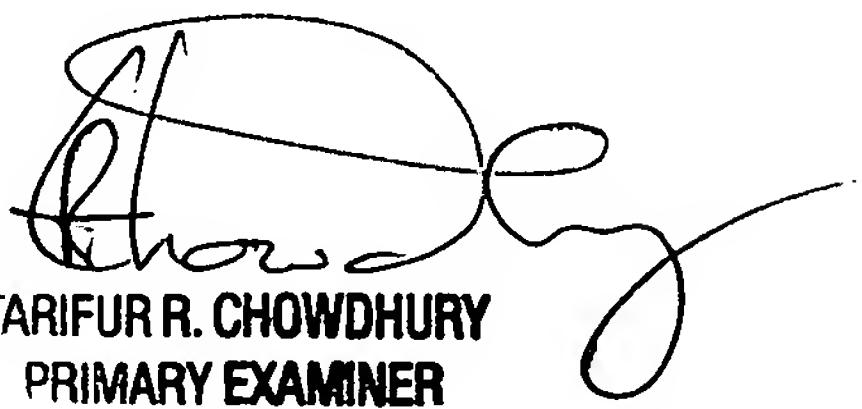
12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tarifur R. Chowdhury whose telephone number is (571) 272-2287. The examiner can normally be reached on M-Th (6:30-5:00) Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on (571) 272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TRC
June 08, 2005



FARIFUR R. CHOWDHURY
PRIMARY EXAMINER